

Working Together to Save Lives

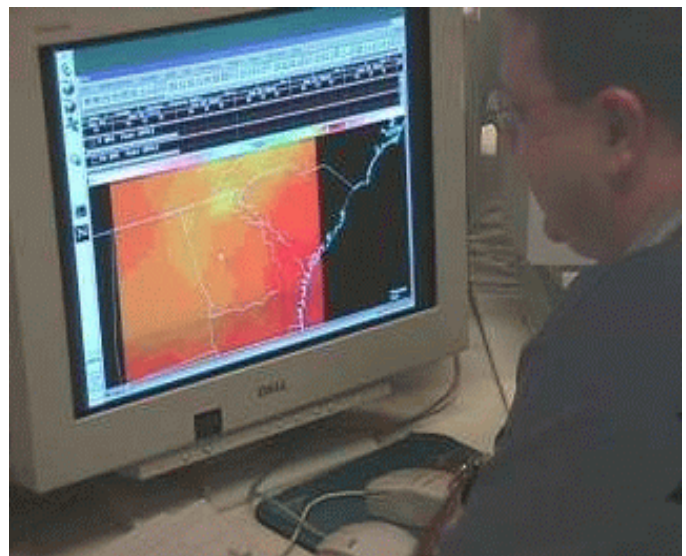


National Digital Forecast Database

Your National Weather Service Goes Digital

Many technological advances and scientific breakthroughs have allowed National Weather Service (NWS) weather forecasts and warnings to become much more specific and accurate. However, the production and dissemination of routine NWS forecasts must keep pace with the need for such information in this digital age. A primary means of providing sensible weather element forecasts (e.g., cloud cover, maximum temperature) from NWS Weather Forecast Offices (WFO) is still in text format.

A new Interactive Forecast Preparation System (IFPS) is being implemented in the NWS which provides not only for preparation of familiar text and voiced products, but also creates in digital (i.e., numerical) form the data from which these products are prepared. These digital forecasts are put into the National Digital Forecast Database (NDFD). In essence, the forecaster now enters the forecast variables in digital form instead of redundantly typing several products containing largely the same information. But the real power of a digital database is that it opens the door for providing much more forecast information and in more useful forms. The NDFD will contain much more data than the NWS was previously able to provide, at time scales as small as hourly and space scales of a few miles.



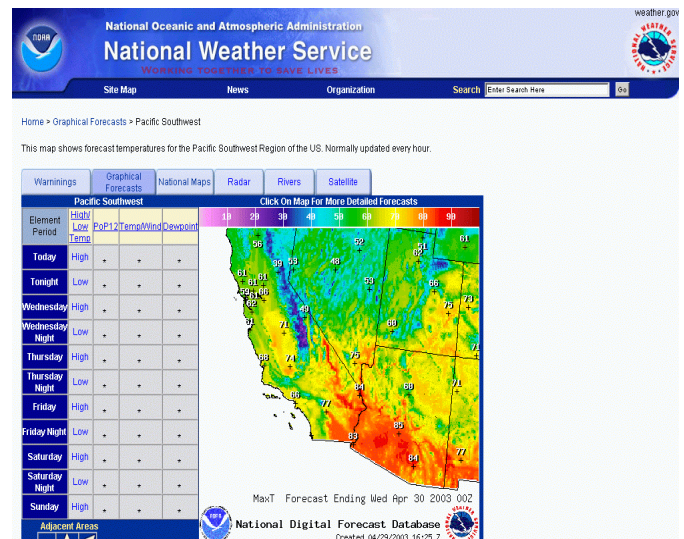
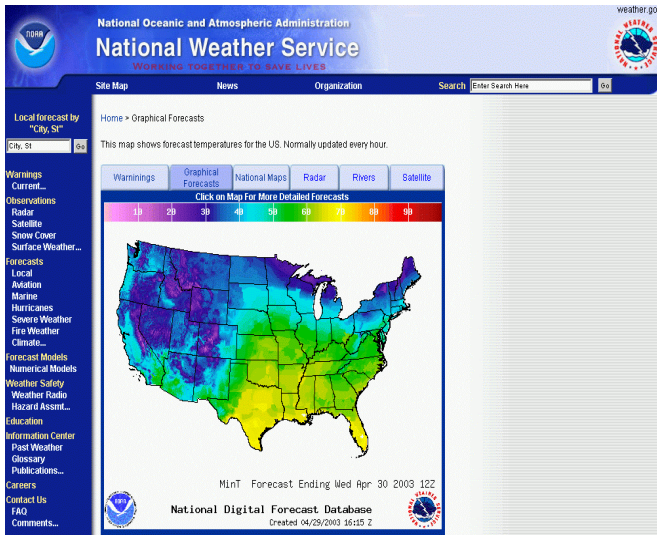
NWS forecasters use IFPS to create forecast grids for their area. These grids are then combined to form the National Digital Forecast Database.

Some Benefits of the NDFD

Benefits of a National digital database are extensive. Any individual user with a computer and access to the internet can download information from the NDFD to suit his or her needs. Businesses will be able to produce a plethora of applications and products, either general information for radio and television broadcast, or tailored weather products for specific customers. For example:

- Decision support systems that fit the forecast to the problem.
- Weather information along a path.
- Forecasts for vehicles and hand-held devices with Global Positioning Systems.
- Text generation in more than one language.
- Controls for smart appliances (e.g., heating, cooling, irrigation).
- Graphics for mass media.
- Teaming the NDFD with geographic information systems (GIS) will provide very powerful capabilities. The NDFD will give customers weather information they want, when they need it.

The NDFD contains a seamless mosaic of NWS digital forecasts from NWS field offices working in collaboration with NWS National Centers for Environmental Prediction (NCEP). Graphical forecasts for the entire country are just one way the NDFD is being utilized to improve the services provided by your NWS. You can view these graphical forecasts at <http://www.nws.noaa.gov/forecasts/graphical>



What the NDFD will contain

The NDFD will be made available to all customers and partners - public and private - and will allow you to create a wide range of text, graphic, and image products of your own. A variety of weather, water, and climate forecasts as well as digital watch, warning, and advisory information will become accessible through interactive web sites. Initially the following forecast elements will be available:

- Daytime Maximum Temperature
- Nighttime Minimum Temperature
- Probability of Precipitation (12 hour)
- Sky Cover
- Temperature
- Dewpoint Temperature
- Wind Direction and Wind Speed

With time, a wider array of forecast elements will be added to the database as will a larger set of graphical presentations.

The NDFD bottom line

In the evolving world of Information Technology, providing gridded, digital information is a vital enhancement of service. People in all walks of life have increasing ability to get and display graphical or digital information, which is easier to use and understand, in addition to being much more specific. There is a need for higher resolution forecast data, as quickly as it is available. The National Digital Forecast Database, a nationwide infrastructure that will composite local gridded forecasts and then disseminate them, will enable the National Weather Service to meet the growing demands of its customers and partners into the 21st century.

Please visit <http://www.nws.noaa.gov/ndfd> for more information